

## **HUMAN GRANULOCYTIC ANAPLASMOSIS**

### **What is human granulocytic anaplasmosis (HGA)?**

Human granulocytic anaplasmosis (HGA) is an infection caused by the bacteria *Anaplasma phagocytophilum*. HGA bacteria infect the white blood cells of their hosts, specifically the granulocytes.

### **How is HGA transmitted?**

In California, people get HGA when they are bitten by a western black-legged tick infected with HGA. This is the same tick that transmits Lyme disease in California. Ticks become infected with HGA when they bite a wild rodent that has the HGA bacteria. If that tick later bites a human, the tick may transmit the HGA bacteria to the person. Dogs and horses can be infected with HGA, but do not transmit the infection to people.

### **What are the symptoms of HGA?**

Most individuals with HGA have no or mild symptoms. When symptoms occur, they resemble the flu, with fever, headache, fatigue, muscle aches, and nausea. Some individuals may also have vomiting, cough, or a rash. Some patients, particularly elderly persons or those with weakened immune systems, may have a more severe illness and need to be hospitalized. HGA is rarely fatal.

### **How is HGA diagnosed and treated?**

If you experience flu-like symptoms within two to three weeks after being bitten by a tick, or after having been in an area where ticks are present, see your doctor or health care provider. Blood tests are available to help your doctor determine whether your illness is HGA. HGA can be successfully treated with antibiotics. Persons with HGA generally begin to feel better within one to two days of starting antibiotic treatment.

### **How common is HGA?**

Most cases of HGA occur in the upper Midwest and northeastern United States. HGA is an uncommon infection in California; only 14 confirmed cases occurred between 1994 and 2006.

### **How can I prevent HGA?**

Taking appropriate precautions to avoid tick bites can reduce the risk of HGA, as well as other diseases transmitted by ticks.

When you are in areas where ticks are present:

- Stay on trails whenever possible.
- Wear light-colored long pants and long sleeve shirts.
- Tuck your shirt into your pants and your pant legs into your socks or boots.
- Apply repellents containing DEET to the skin.
- Apply Permethrin to your clothing to kill ticks.
- Check yourself for ticks promptly after being in an area where ticks are present.
- Remove any ticks you find on your body right away.

**How should attached ticks be removed?**

- Using tweezers, grasp the tick's mouthparts as close to the skin as possible.
- Gently pull the tick straight out, using a firm steady motion.
- Wash your hands and the bite site with soap and water. Apply an antiseptic to the bite site.
- Consult with your physician if you develop any symptoms within 30 days of the tick bite.

**Where can I find more information on HGA?**

The U.S. Centers for Disease Control and Prevention has information available at:

<http://www.cdc.gov/ncidod/dvrd/ehrlichia/index.htm>.